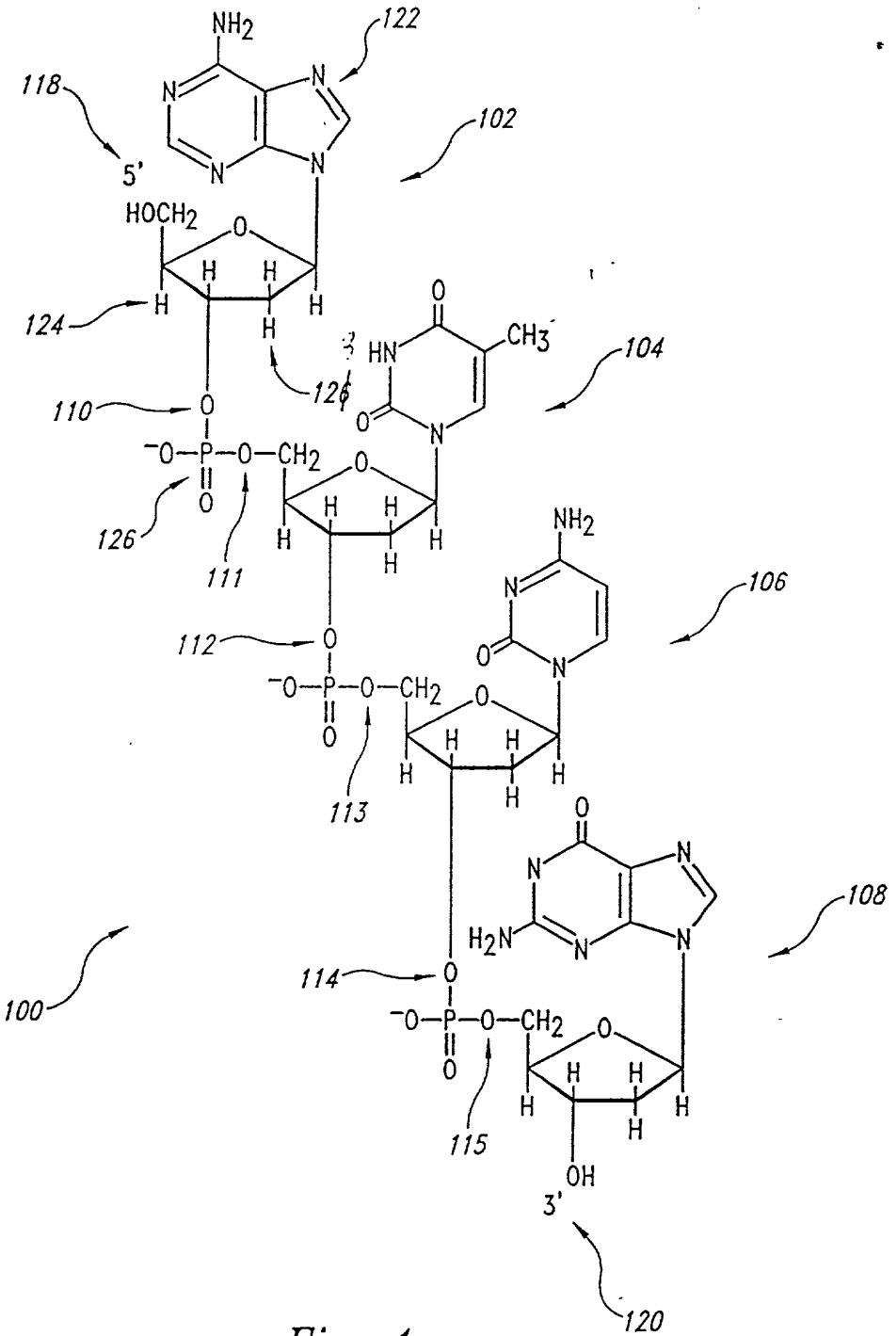

NH2
122
118
5'
102
HOCH2
O
H
H
H
H
H
124
O
HN
CH3
104
126
110
O
O
N
−O−P−O−CH2
O
126
H
H
H
H
111
NH2
N
106
112
O
O
N
−O−P−O−CH2
O
H
H
H
H
113
O
N
N
108
H2N
N
N
100
114
O
−O−P−O−CH2
O
H
H
H
H
H
115
OH
3'
120

Fig. 1

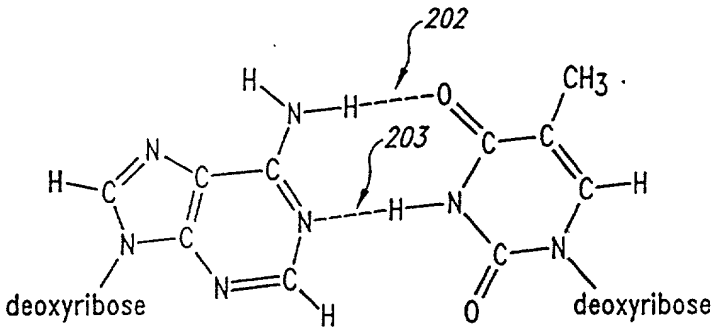

202
203
deoxyribose
deoxyribose

Fig. 2A

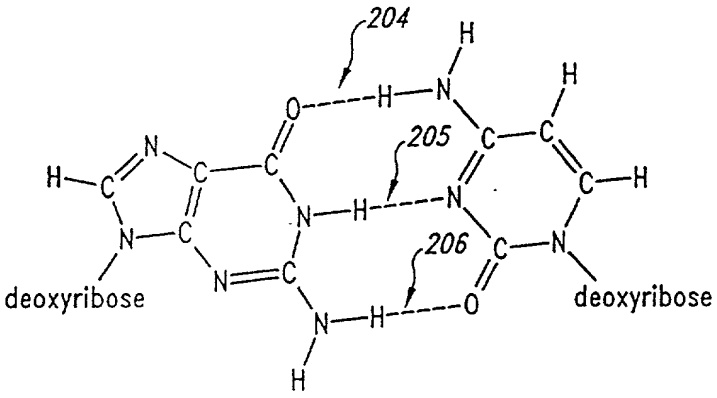

204
205
206
deoxyribose
deoxyribose

Fig. 2B

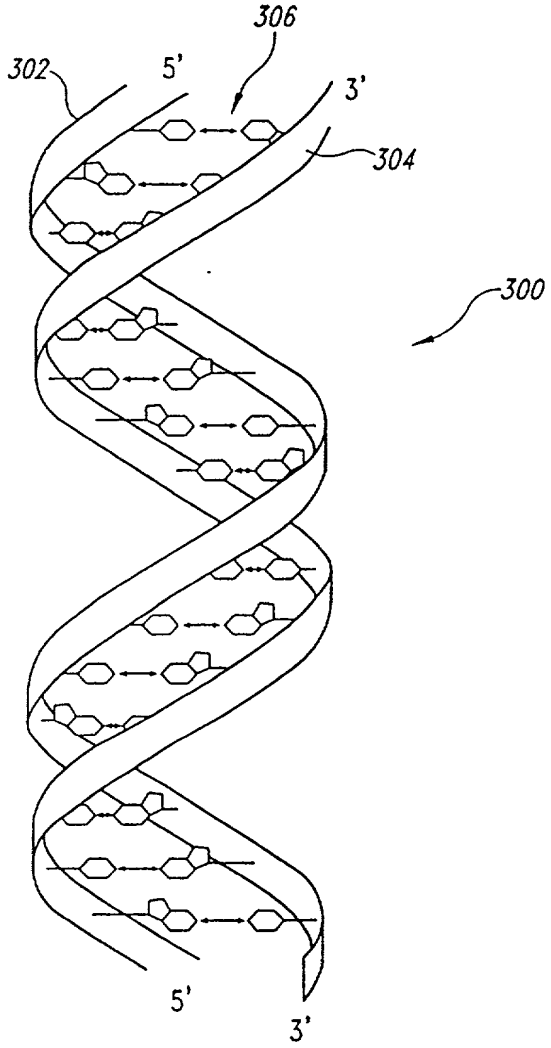


Fig. 3

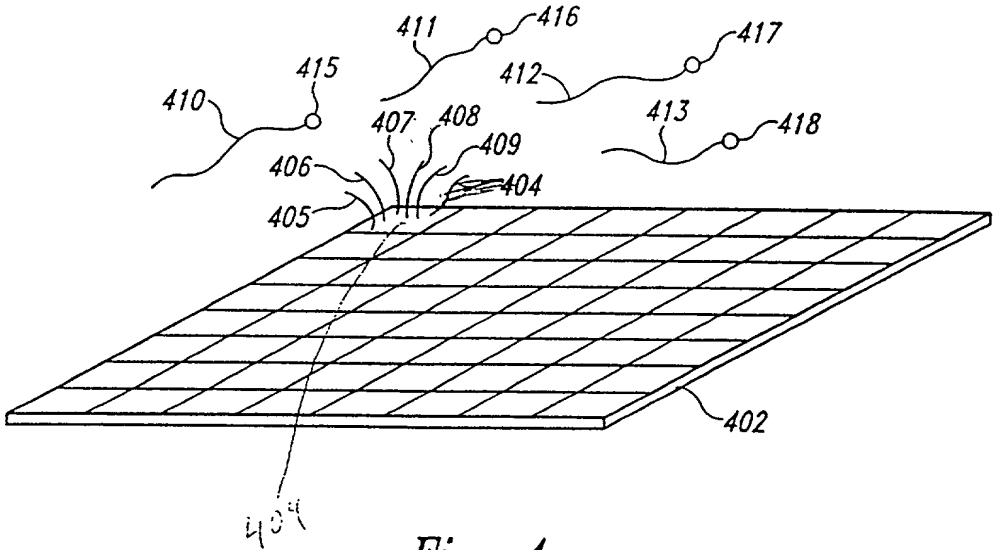

411
416
417
415
412
410
407
408
413
418
409
406
404
405
402

Fig. 4

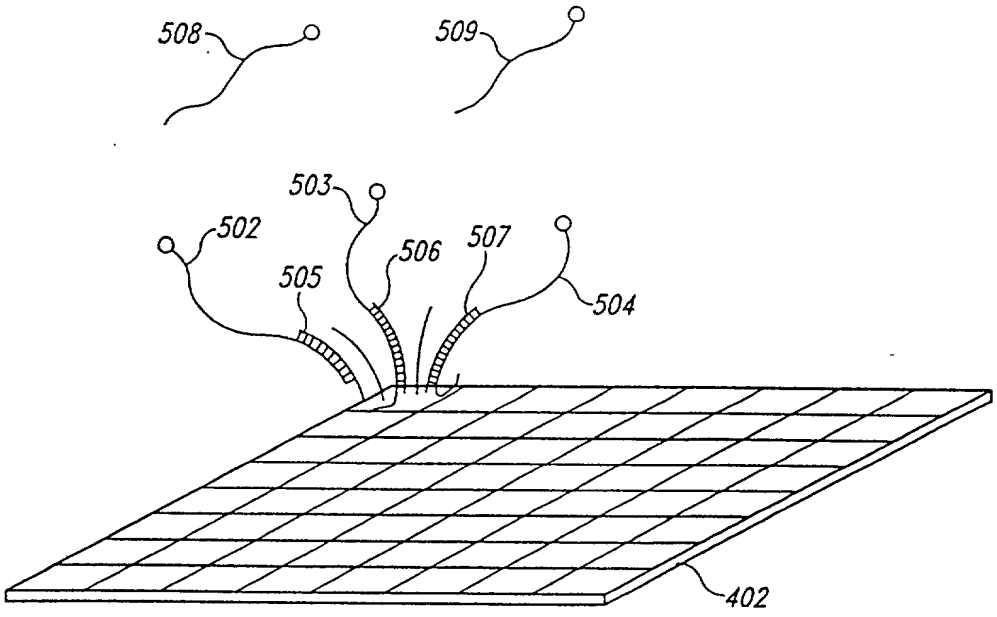

508
509
503
502
506
507
505
504
402

Fig. 5

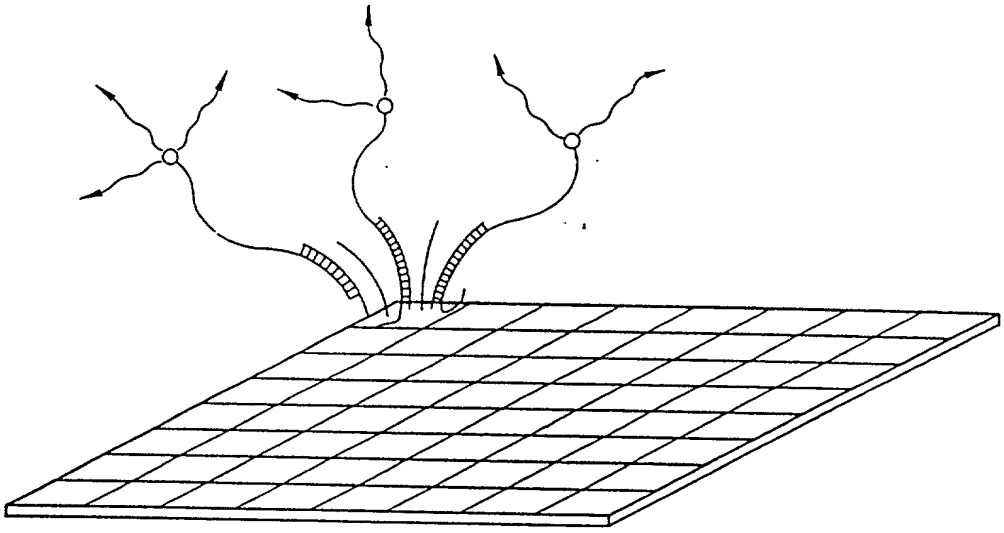


Fig. 6

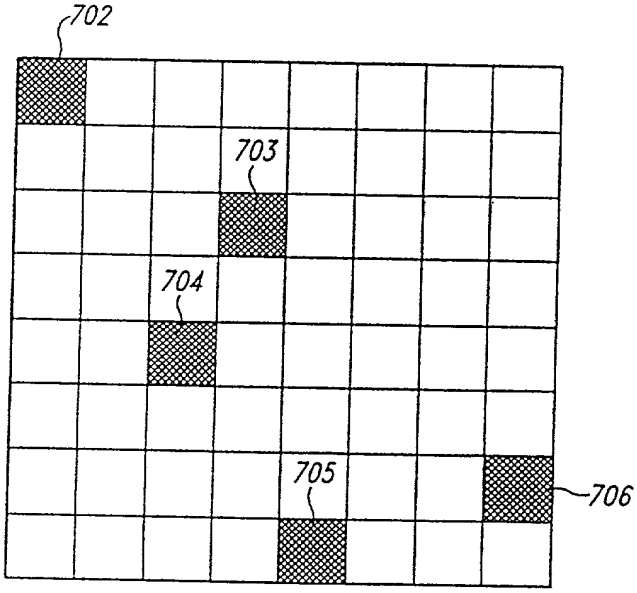
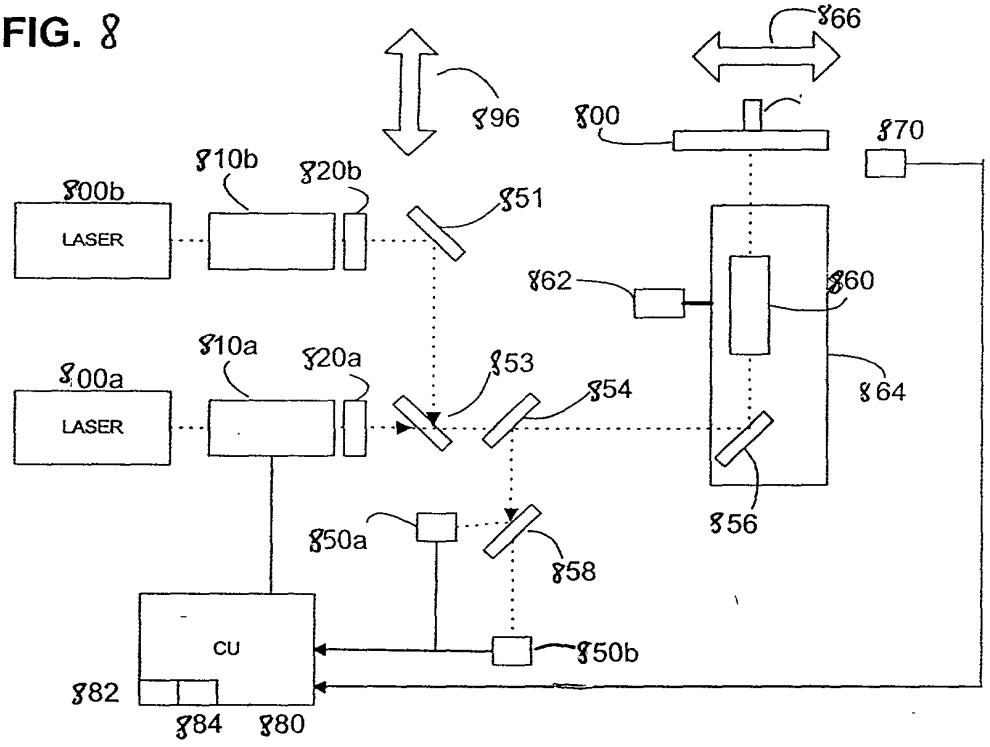


Fig. 7

FIG. 8


866
896
800
870
810b
820b
800b
LASER
851
862
860
810a
820a
800a
LASER
853
854
864
856
850a
858
CU
850b
882
884
880

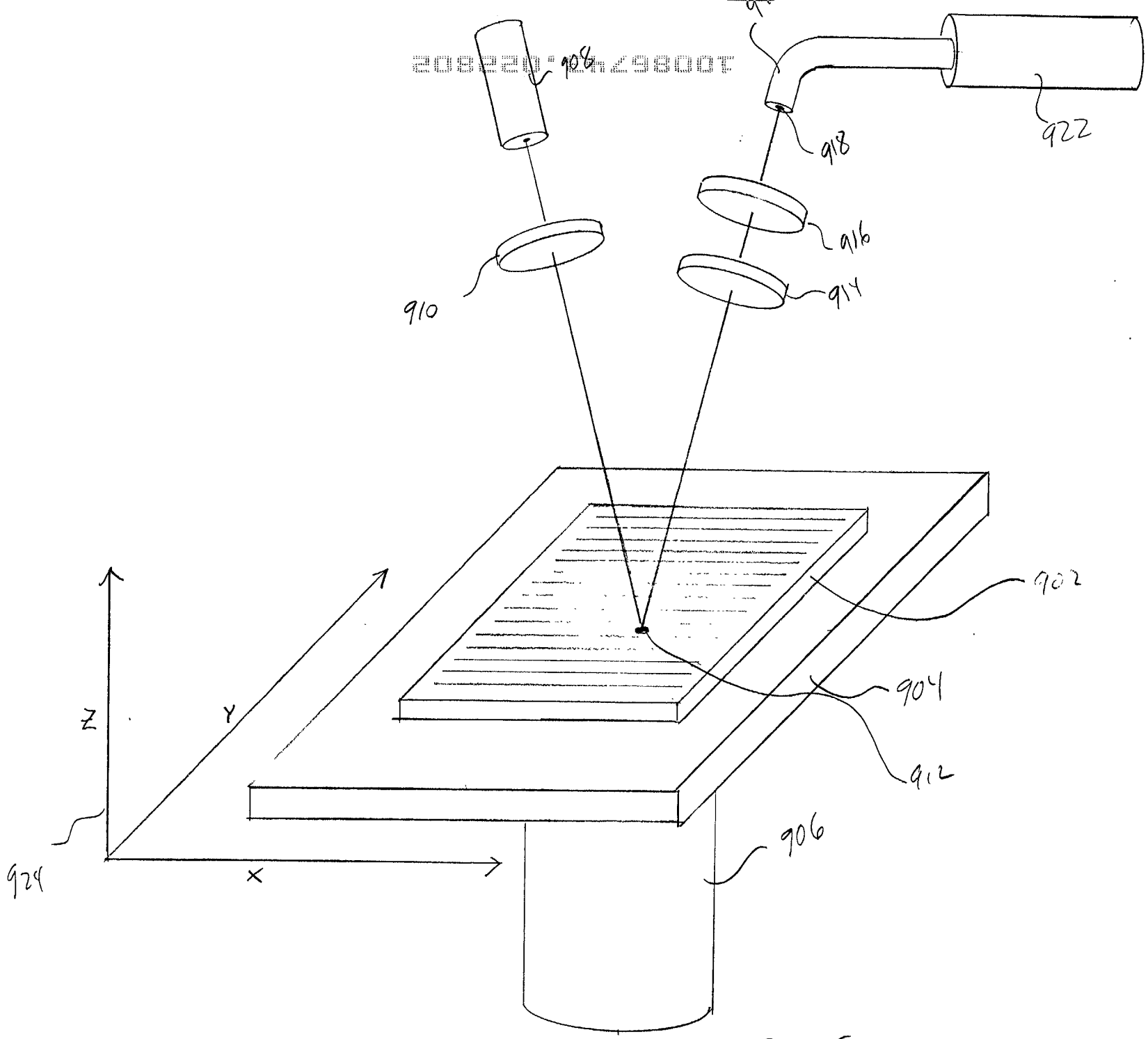


Figure 9

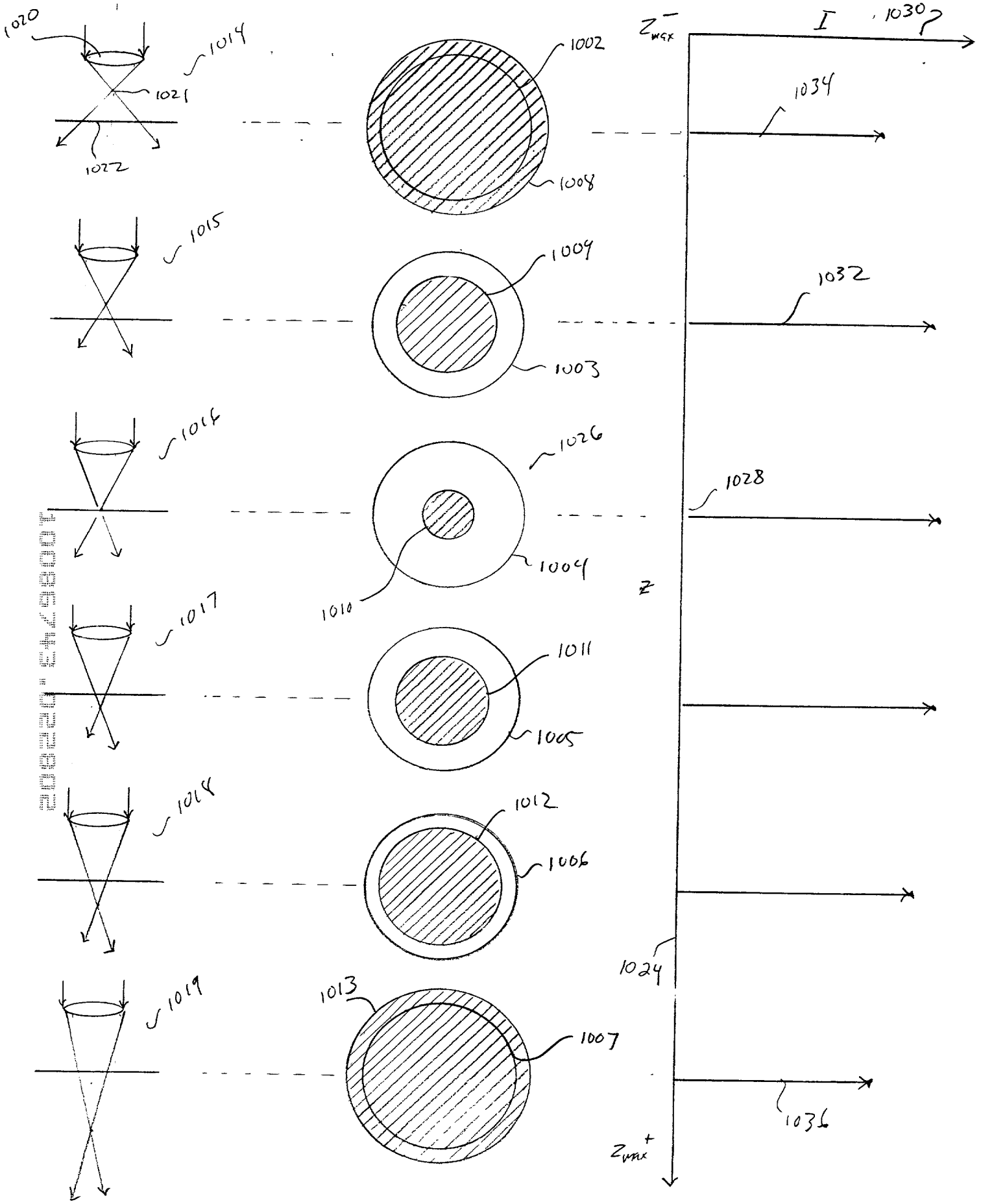

1020
1014
1021
1022
1002
1008
1015
1009
1003
1016
1026
1004
1010
1017
1011
1005
1018
1012
1006
1019
1013
1007
Z_{max}^-
I
1030
1034
1032
1028
Z
1024
1036
Z_{max}^+

Figure 10

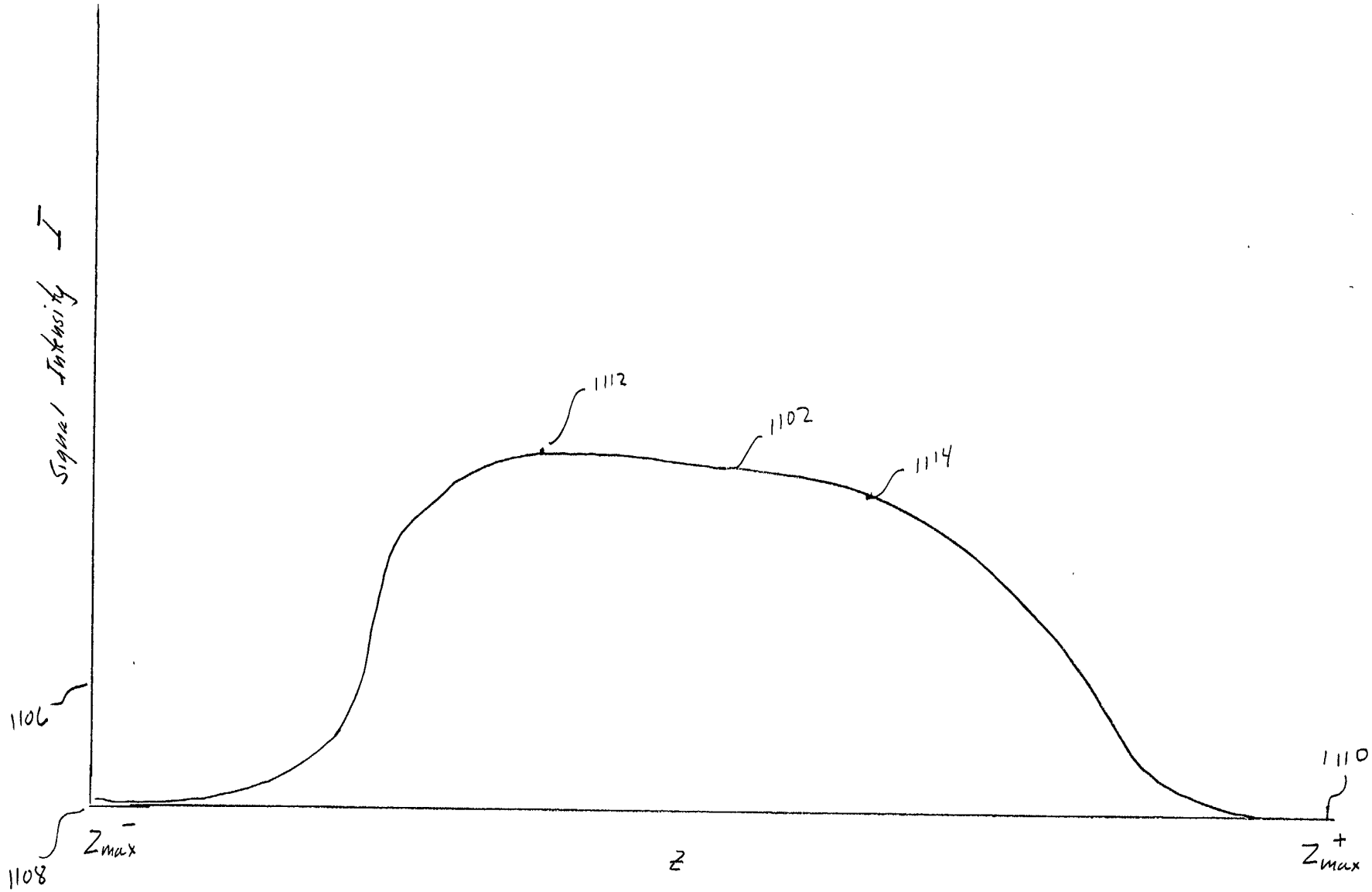


Figure 11

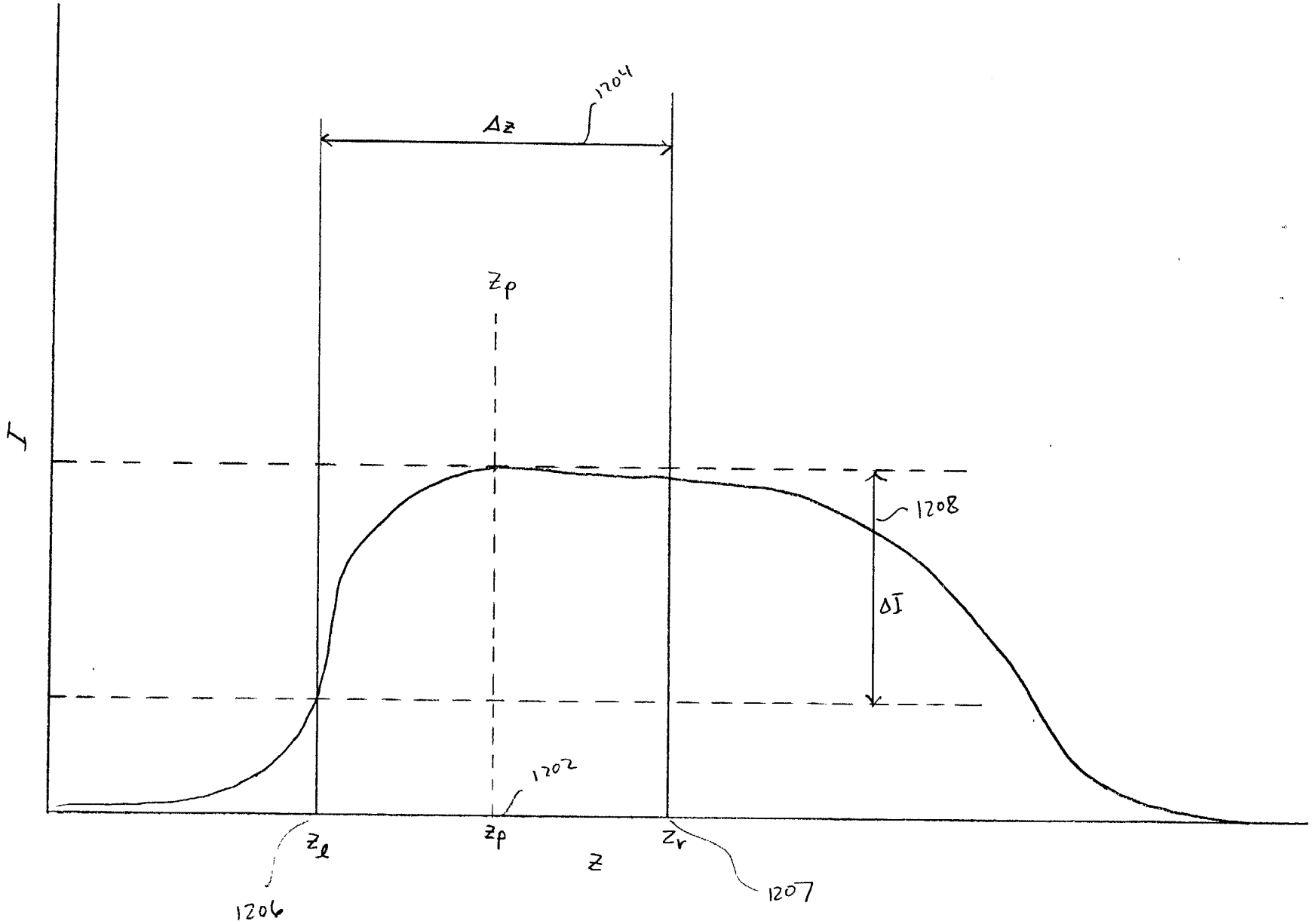


Figure 12

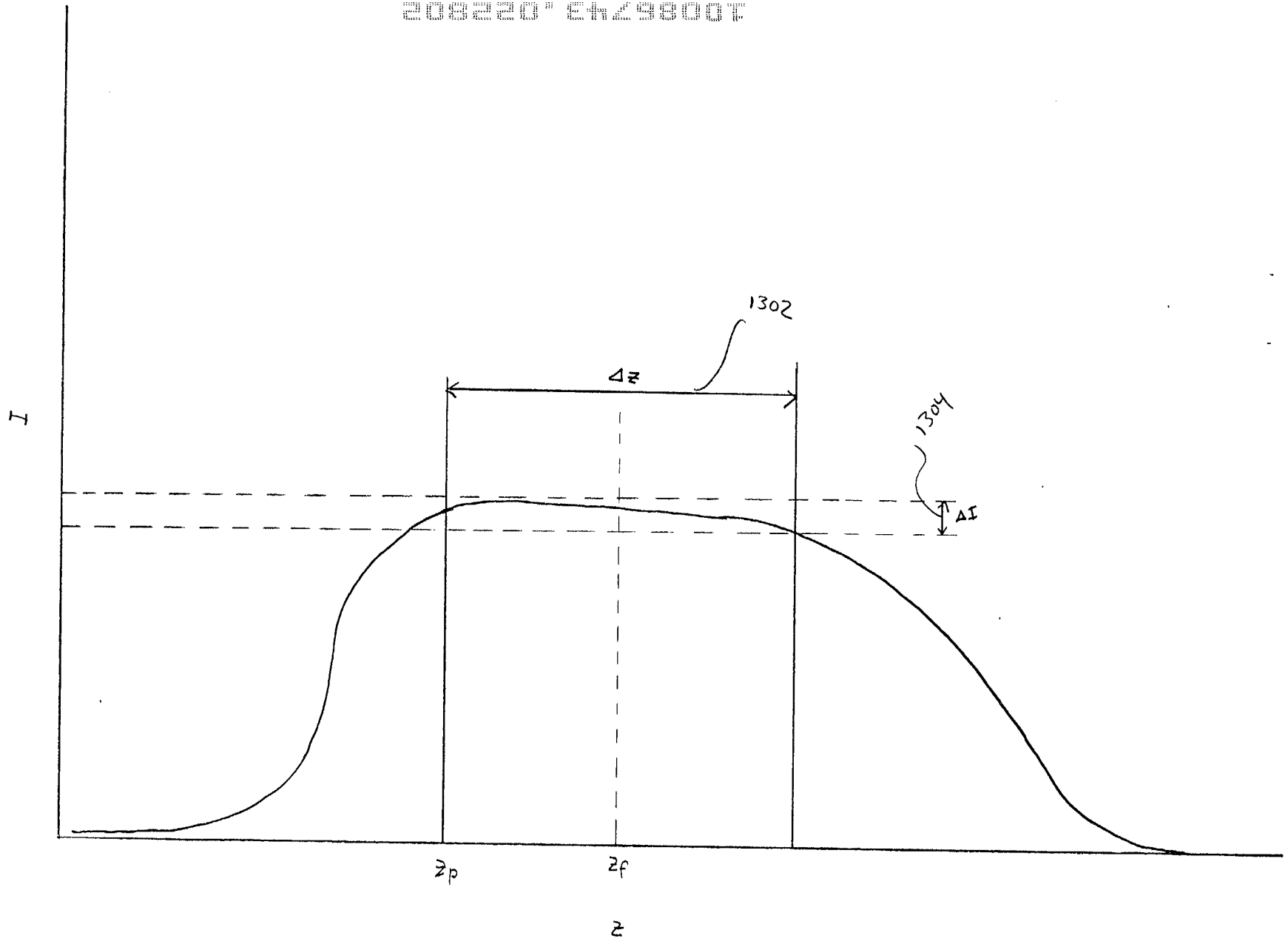


Figure 13

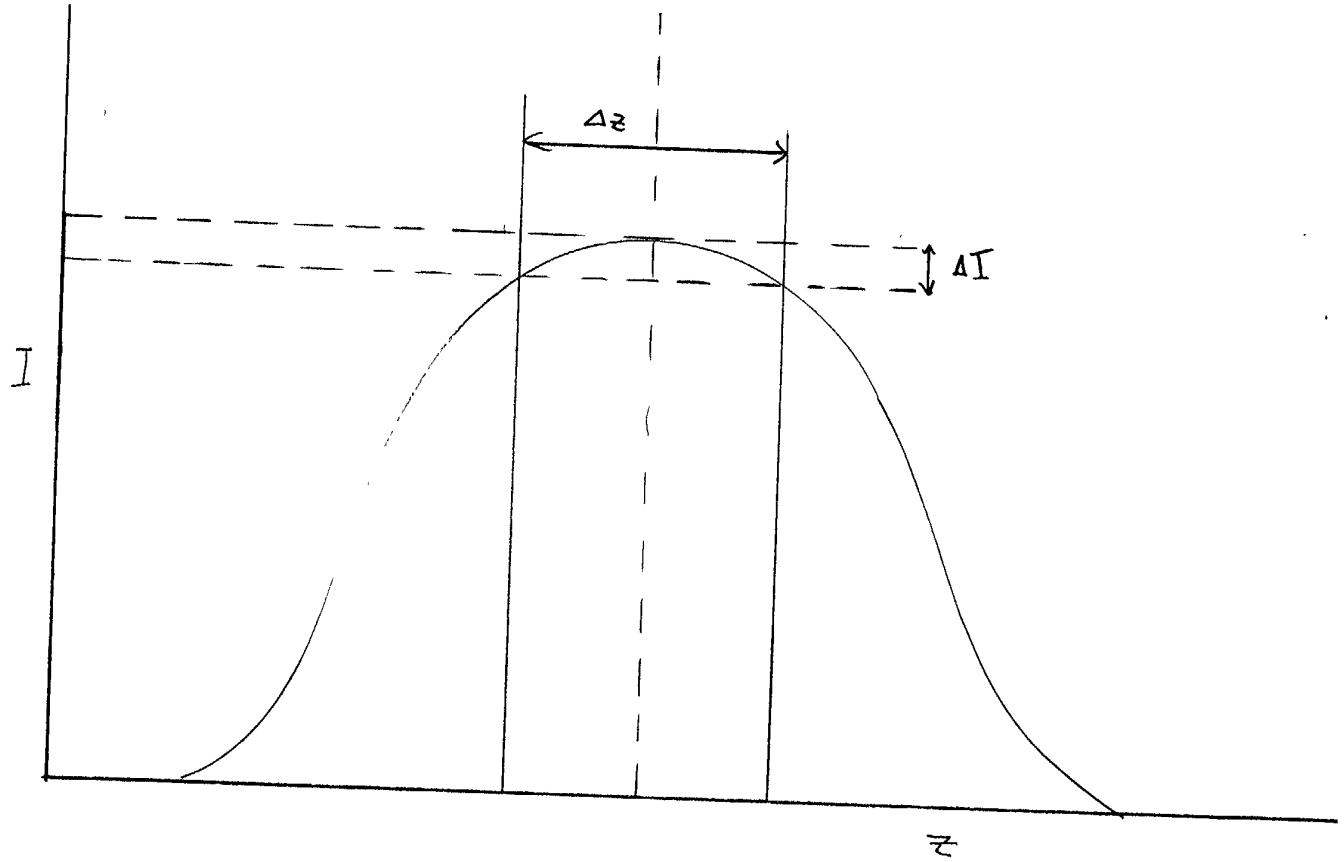


Figure 14

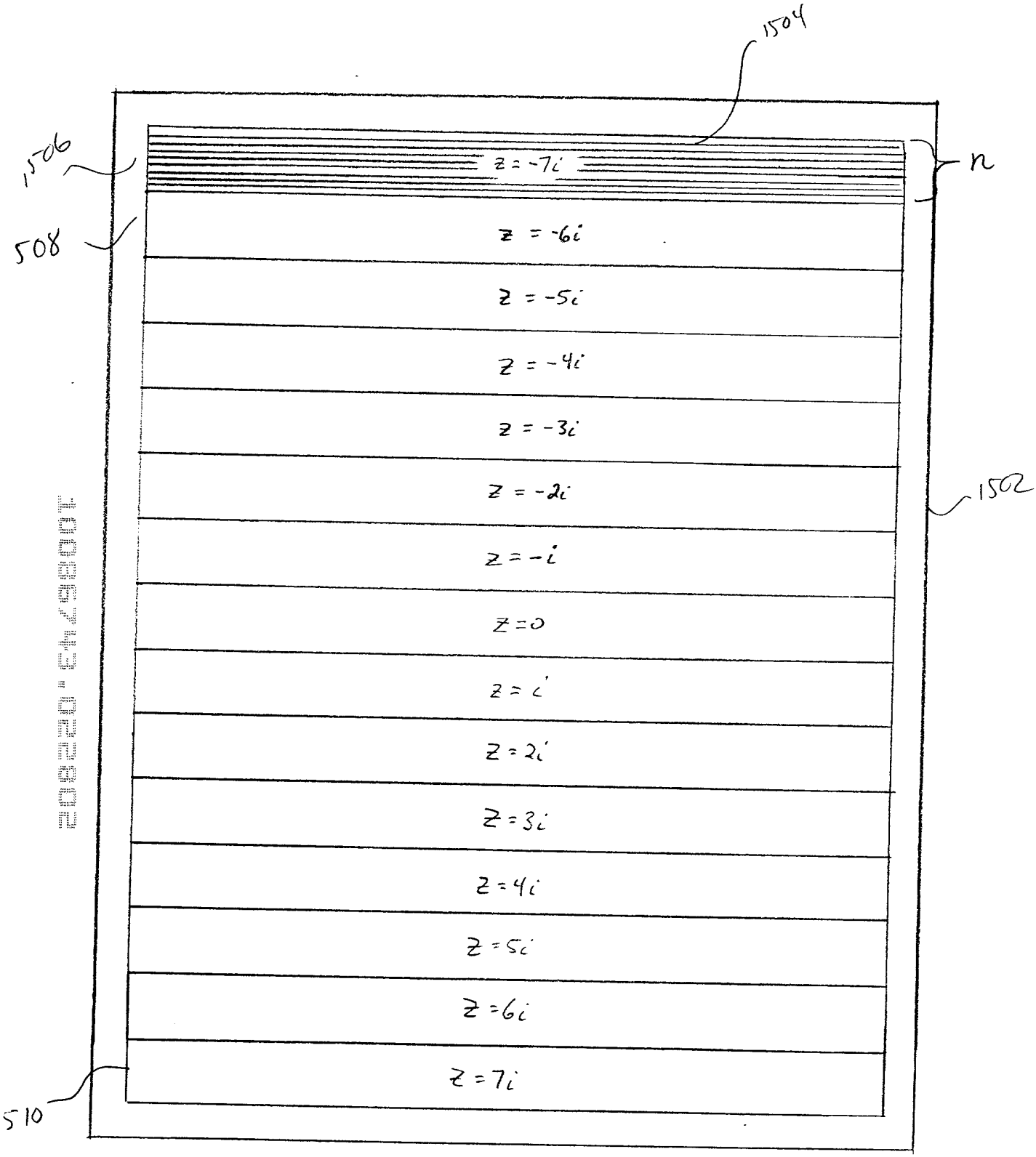

1504
1506
508
510
1502
n
z = -7i
z = -6i
z = -5i
z = -4i
z = -3i
z = -2i
z = -i
z = 0
z = i
z = 2i
z = 3i
z = 4i
z = 5i
z = 6i
z = 7i

Figure 15

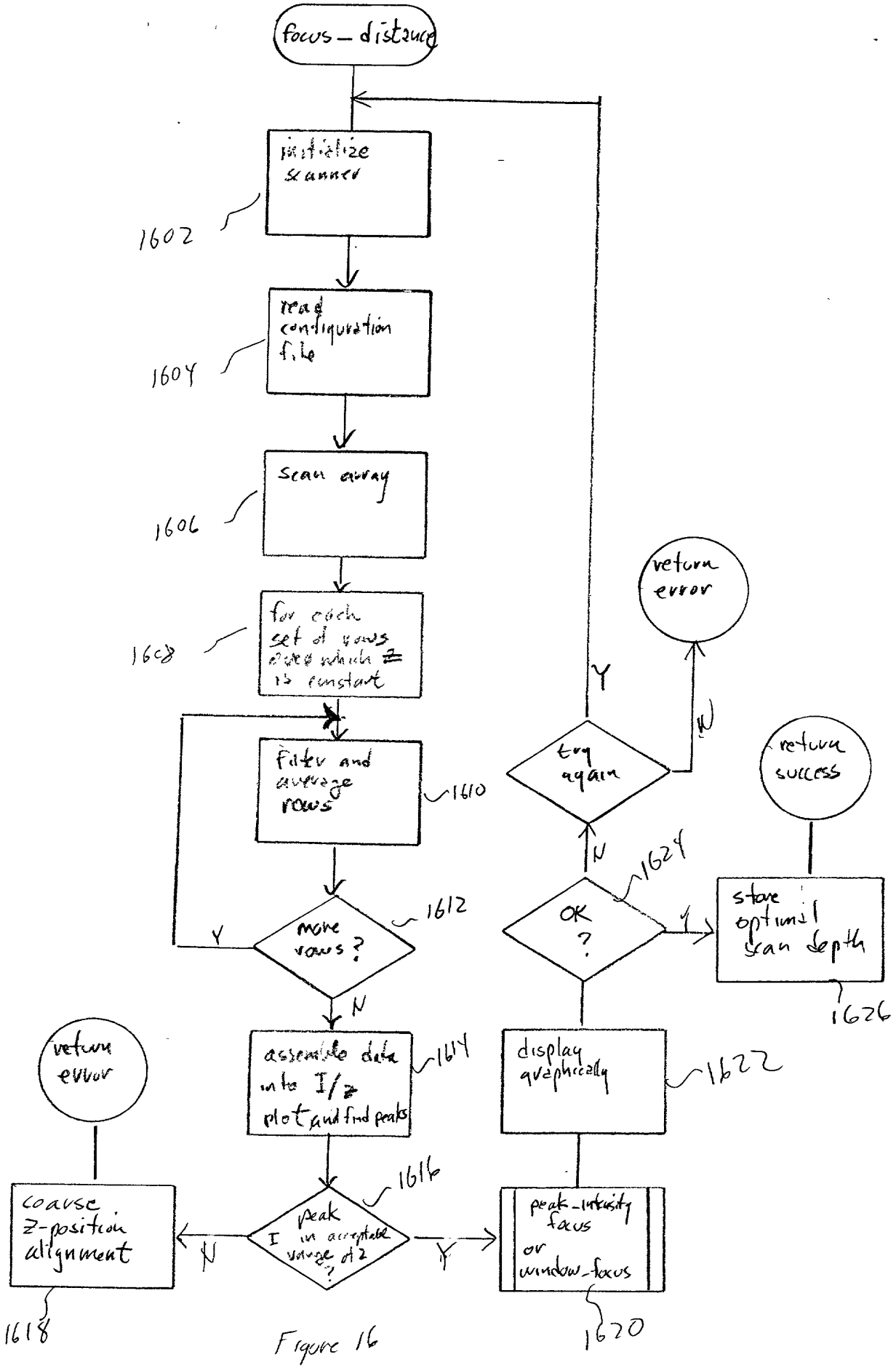

focus_distance
initialize scanner
1602
read configuration file
1604
scan array
1606
for each set of rows over which Z is constant
1608
filter and average rows
1610
more rows?
1612
Y
N
assemble data into I/z plot and find peaks
1614
peak I in acceptable range of Z?
1616
Y
N
coarse z-position alignment
1618
peak_intensity focus or window_focus
1620
display graphically
1622
OK ?
1624
Y
N
try again
Y
N
return error
return success
store optimal scan depth
1626
return error

Figure 16

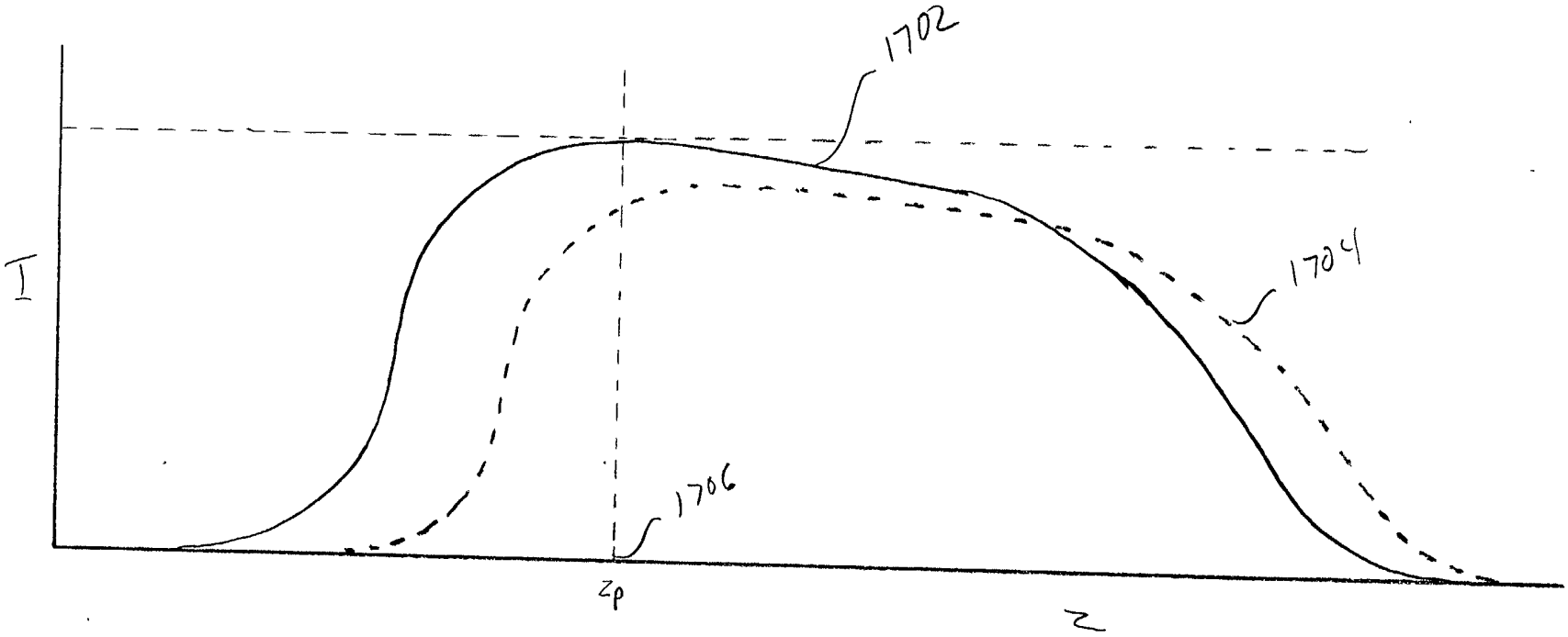


Figure 17

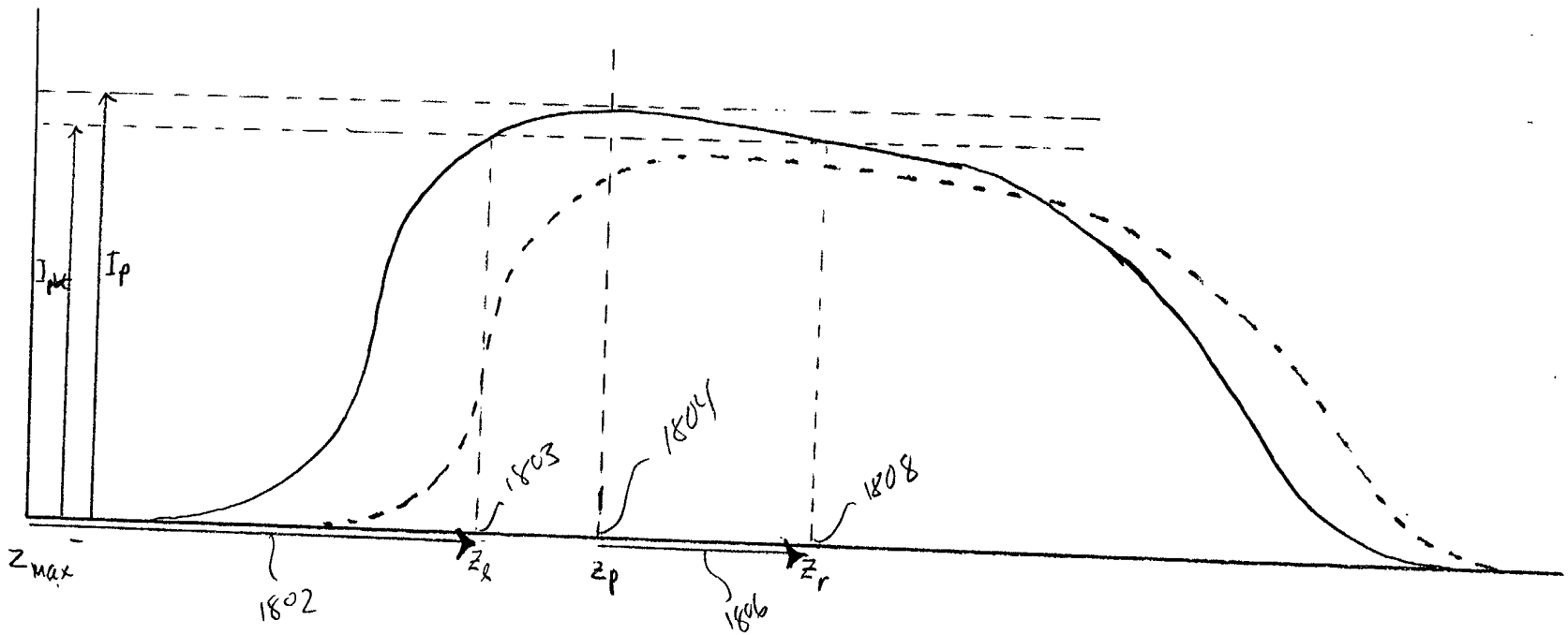


Figure 18

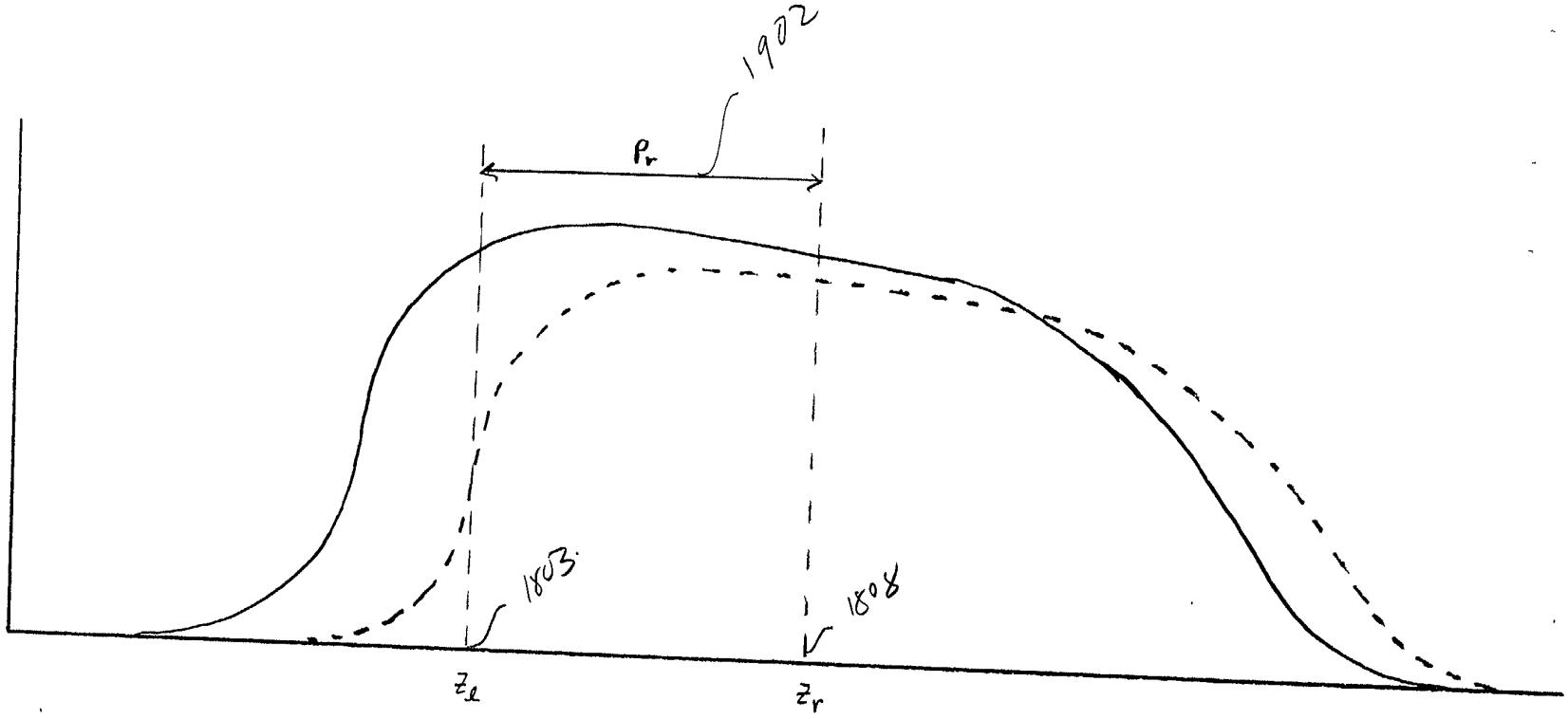


Figure 19

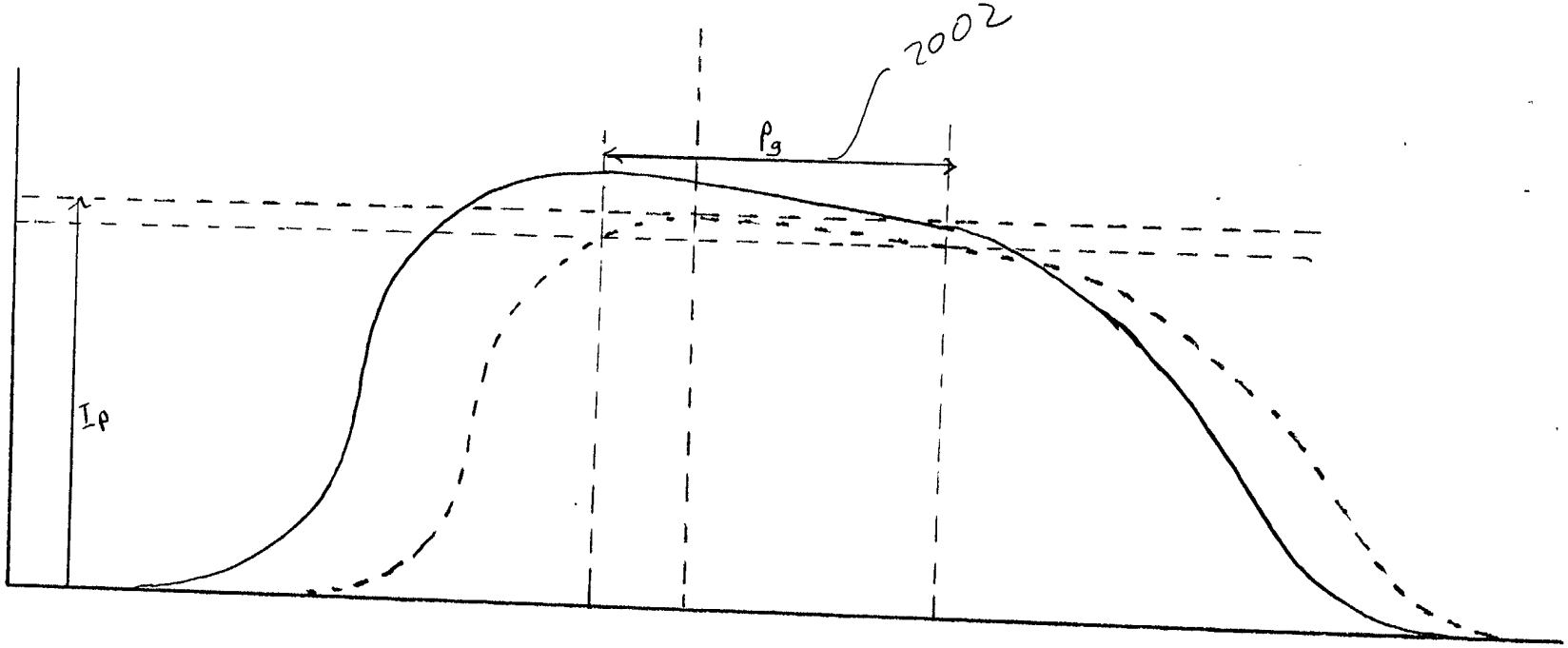


Figure 20

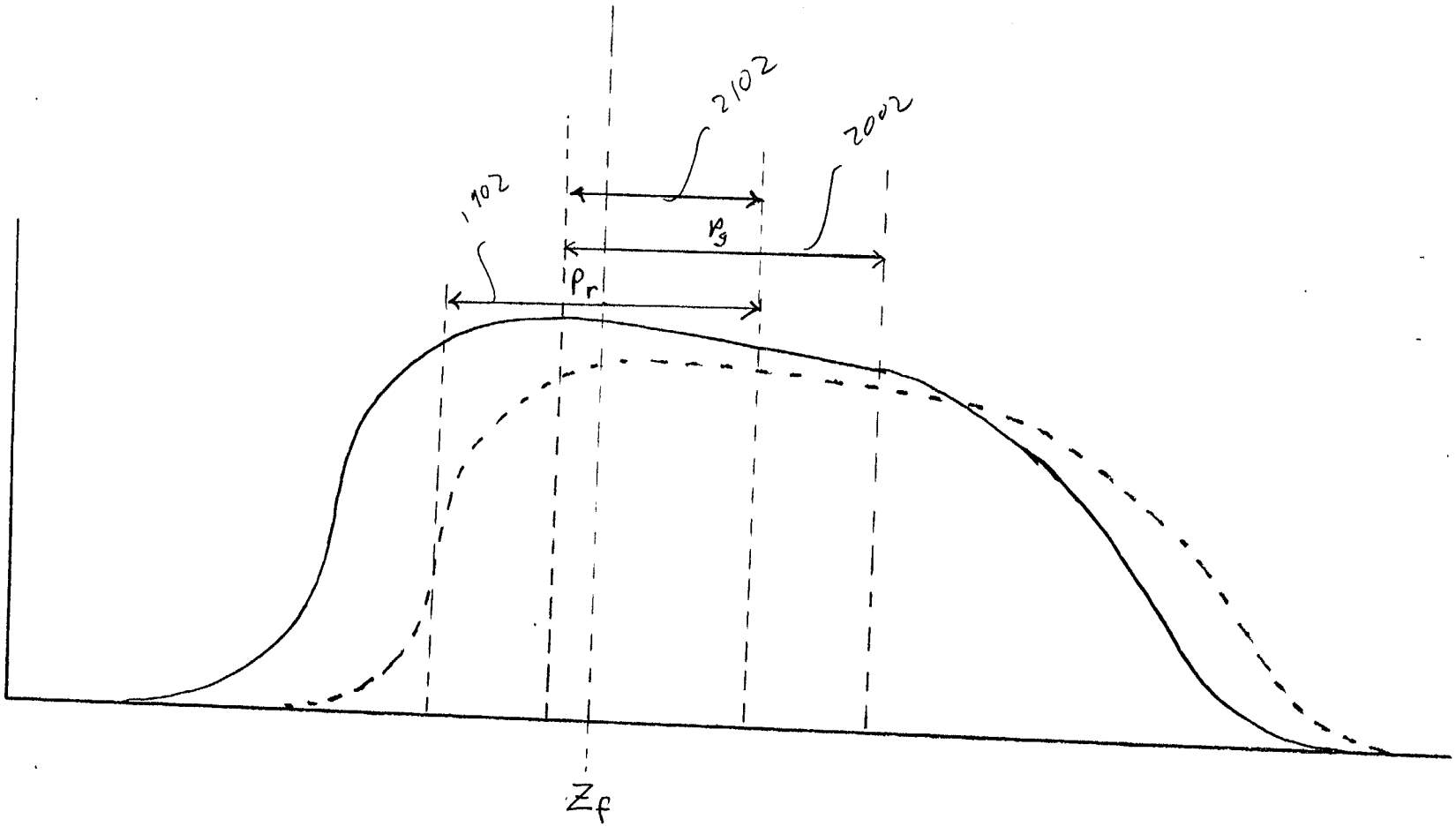


Figure 21

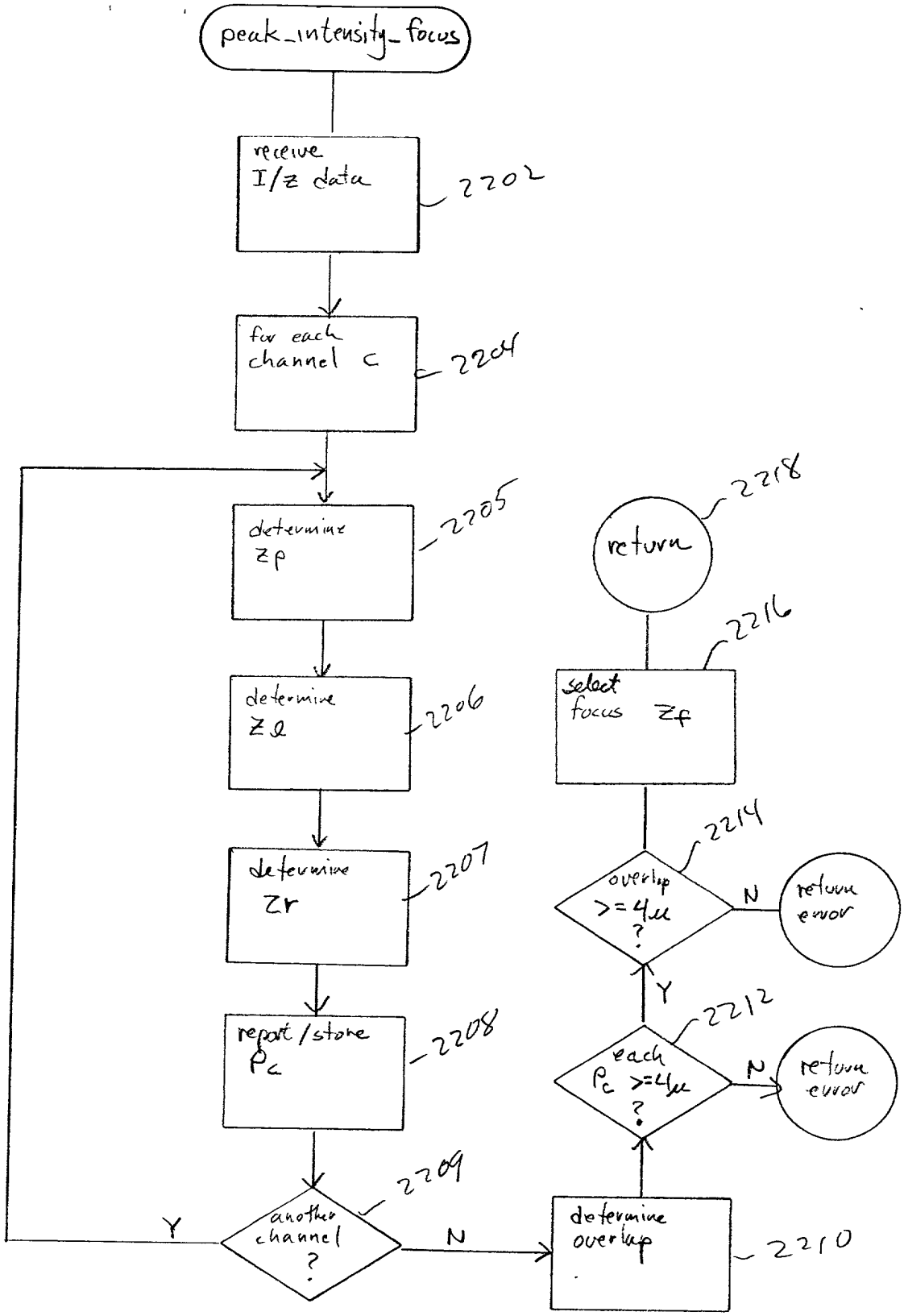

peak_intensity_focus
receive I/z data
2202
for each channel c
2204
determine zp
2205
determine zl
2206
determine zr
2207
report/store Pc
2208
another channel ?
2209
Y
N
determine overlap
2210
each Pc >=4μ ?
2212
N
return error
Y
overlap >=4μ ?
2214
N
return error
select focus zf
2216
return
2218

Figure 22

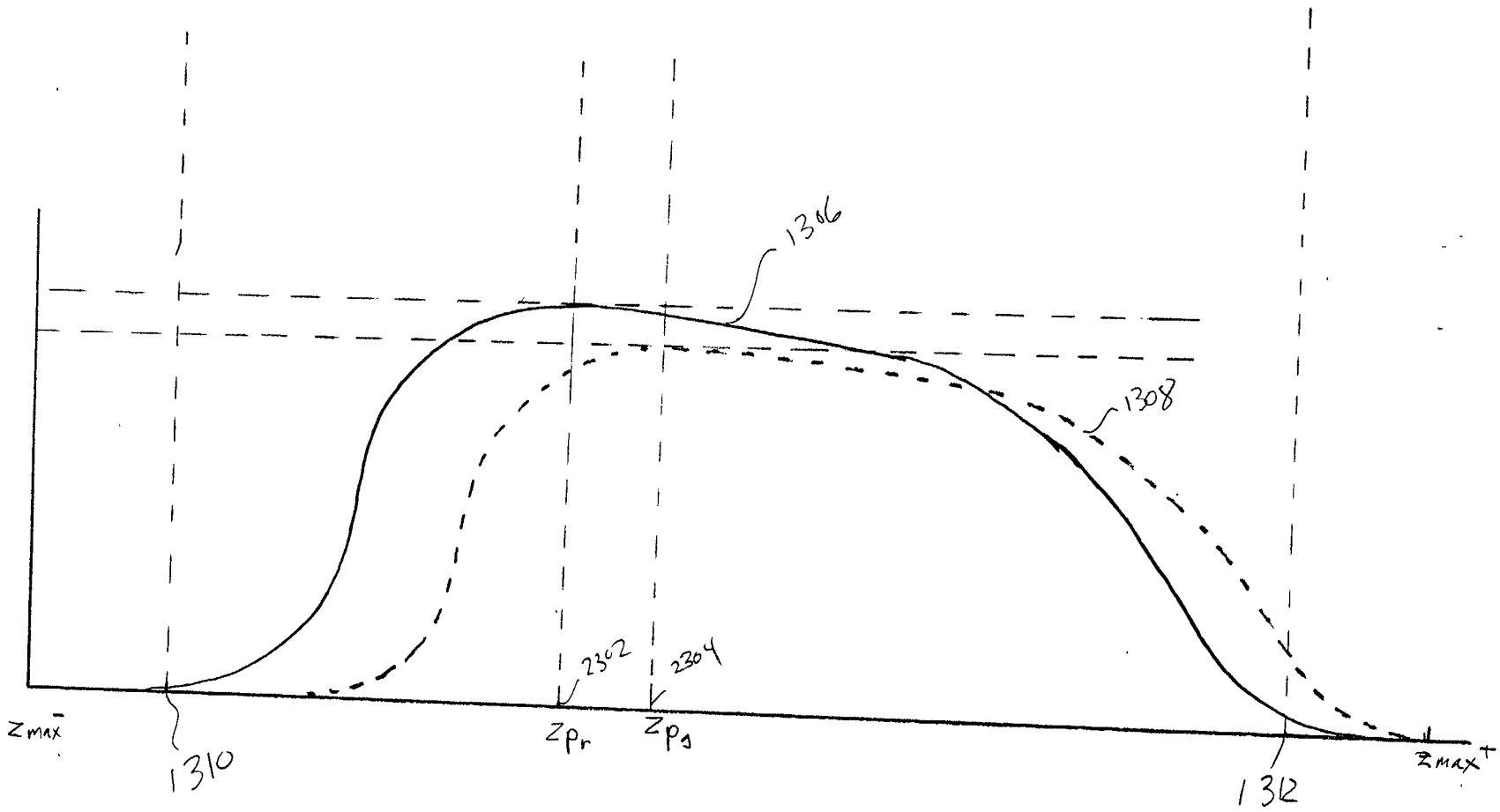


Figure 23

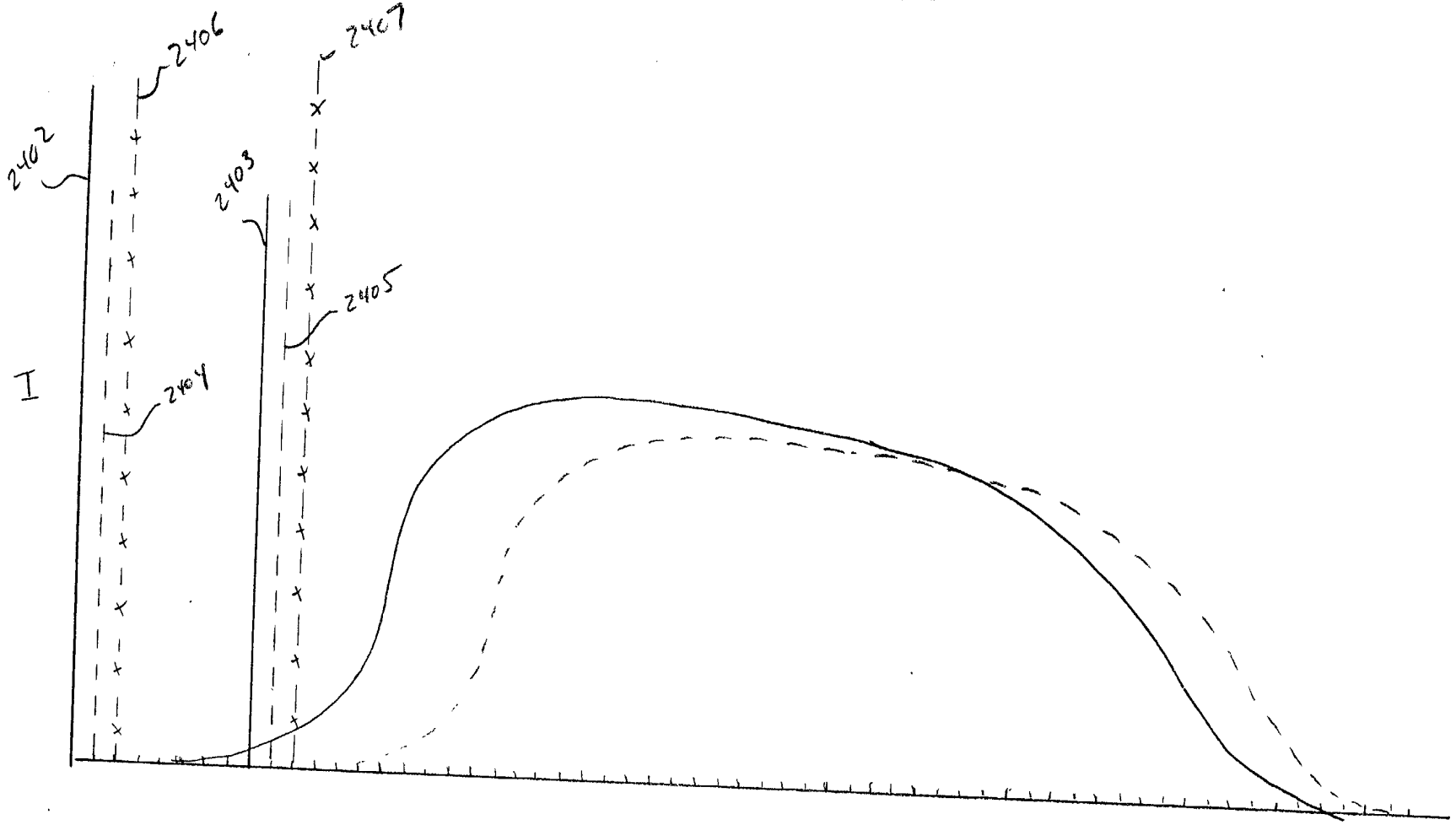


Figure 24

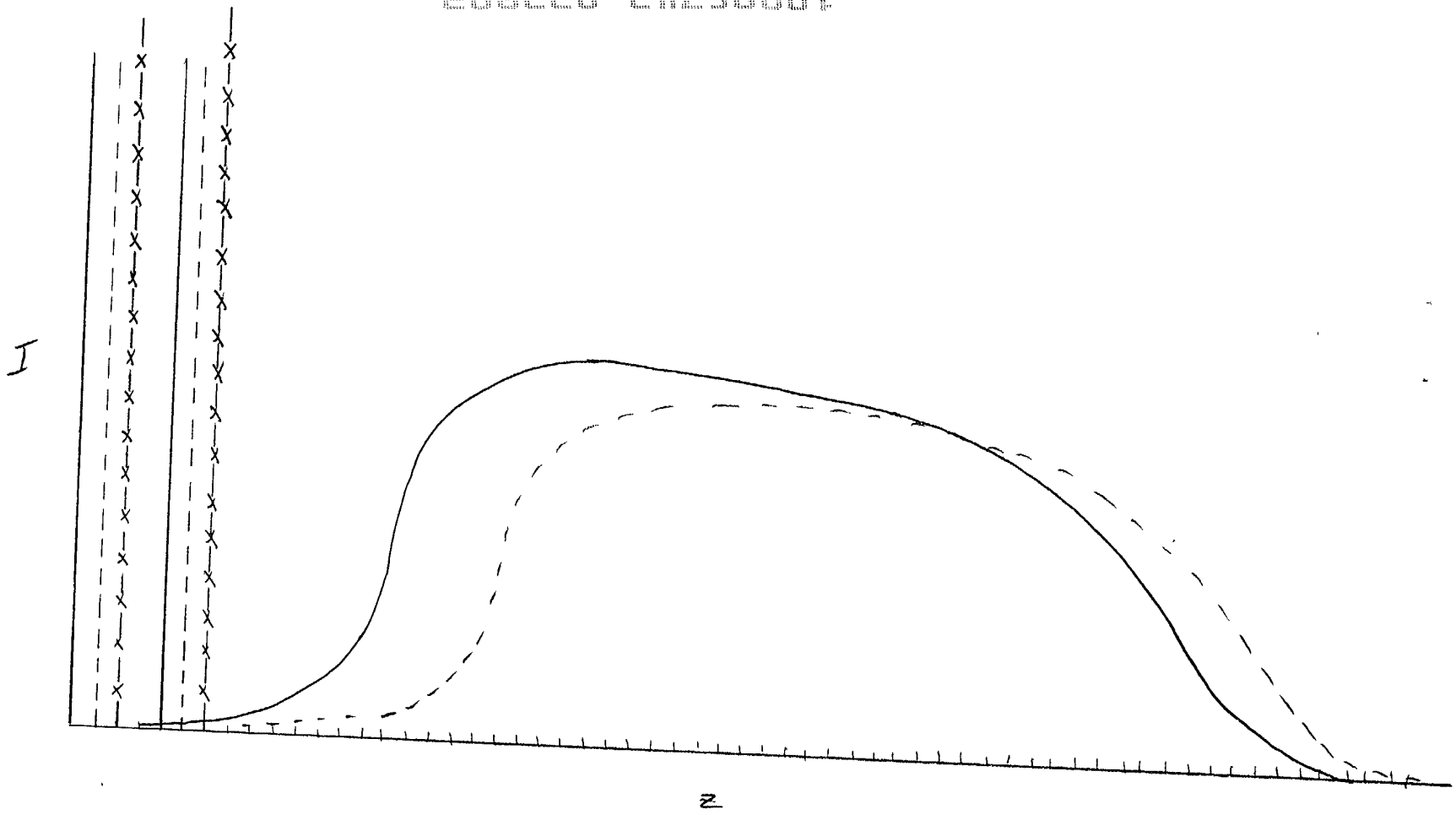


Figure 25

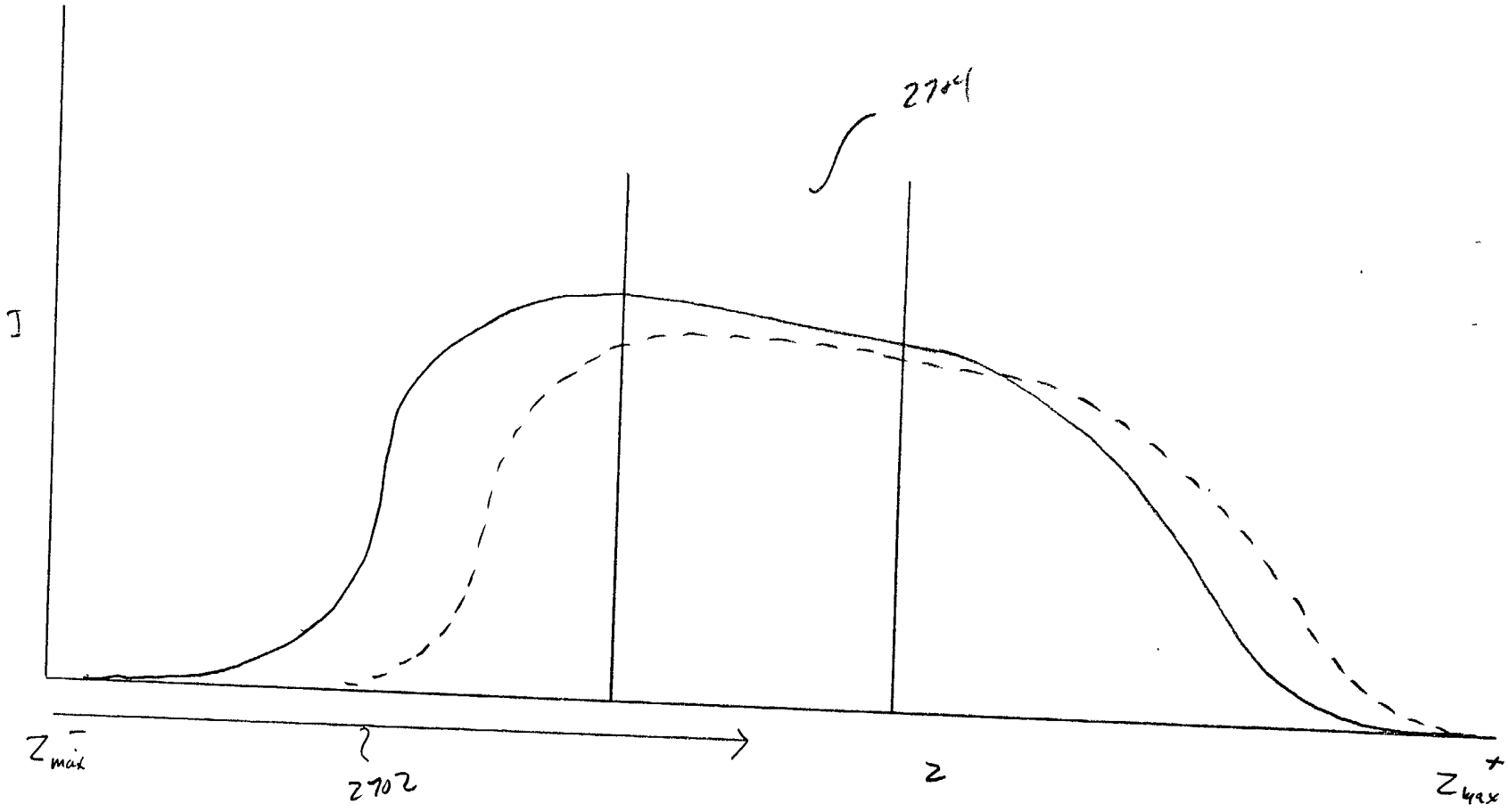


Figure 26

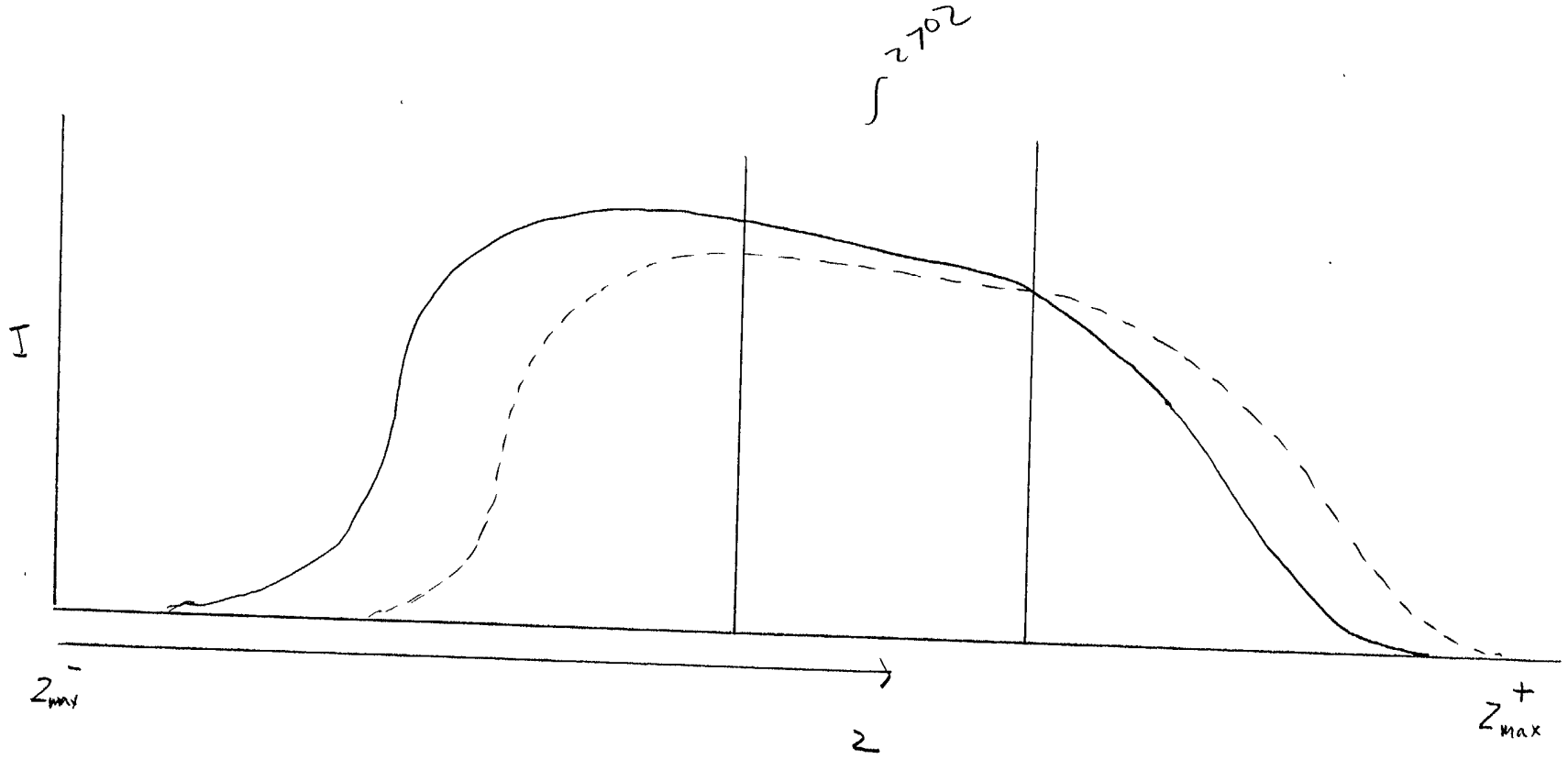


Figure 27

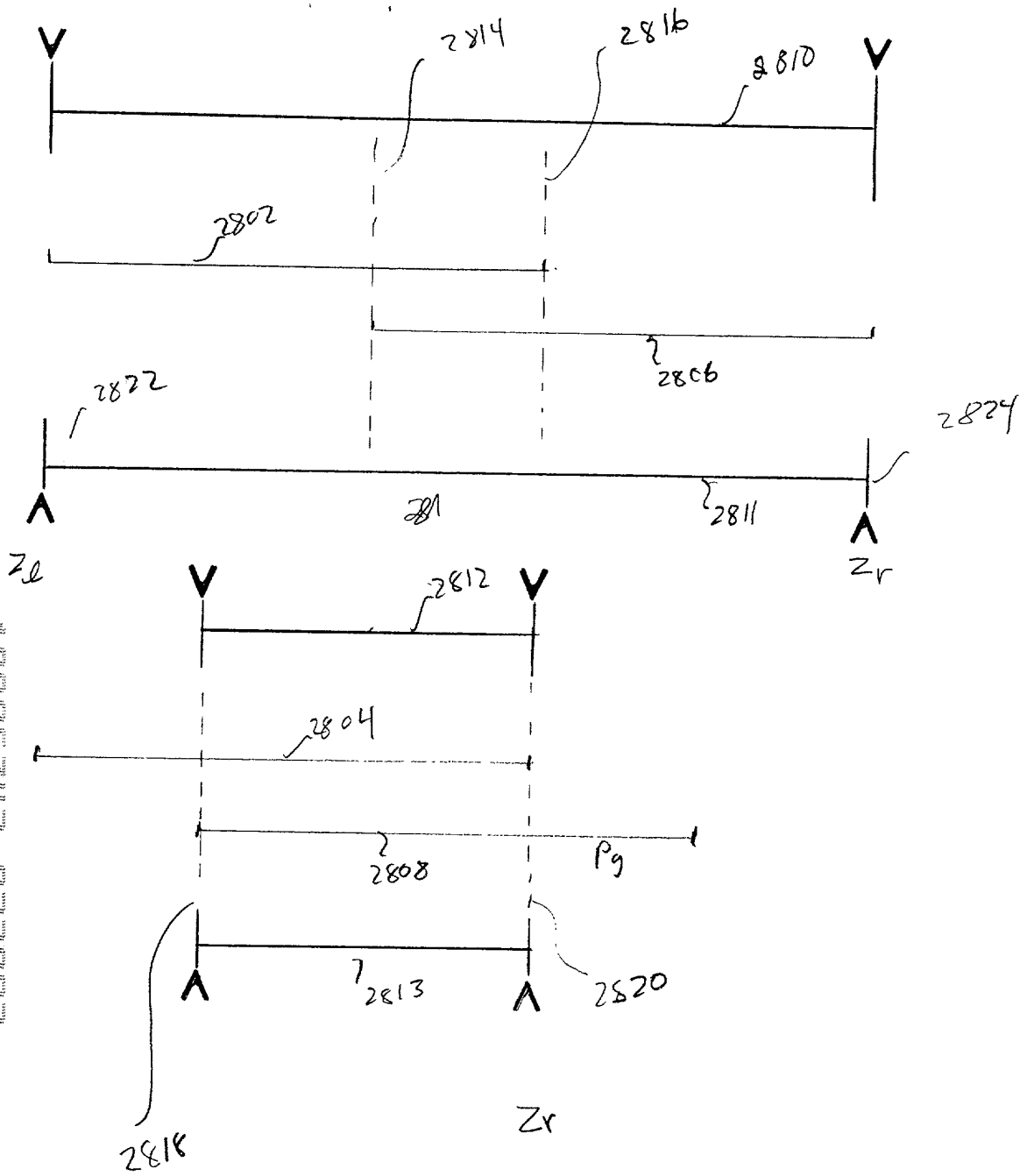

2814
2816
2810
2802
2806
2822
2824
281
2811
z_l
z_r
2812
2804
2808
Pg
2813
2820
2818
z_r
z_l

Figure 28B

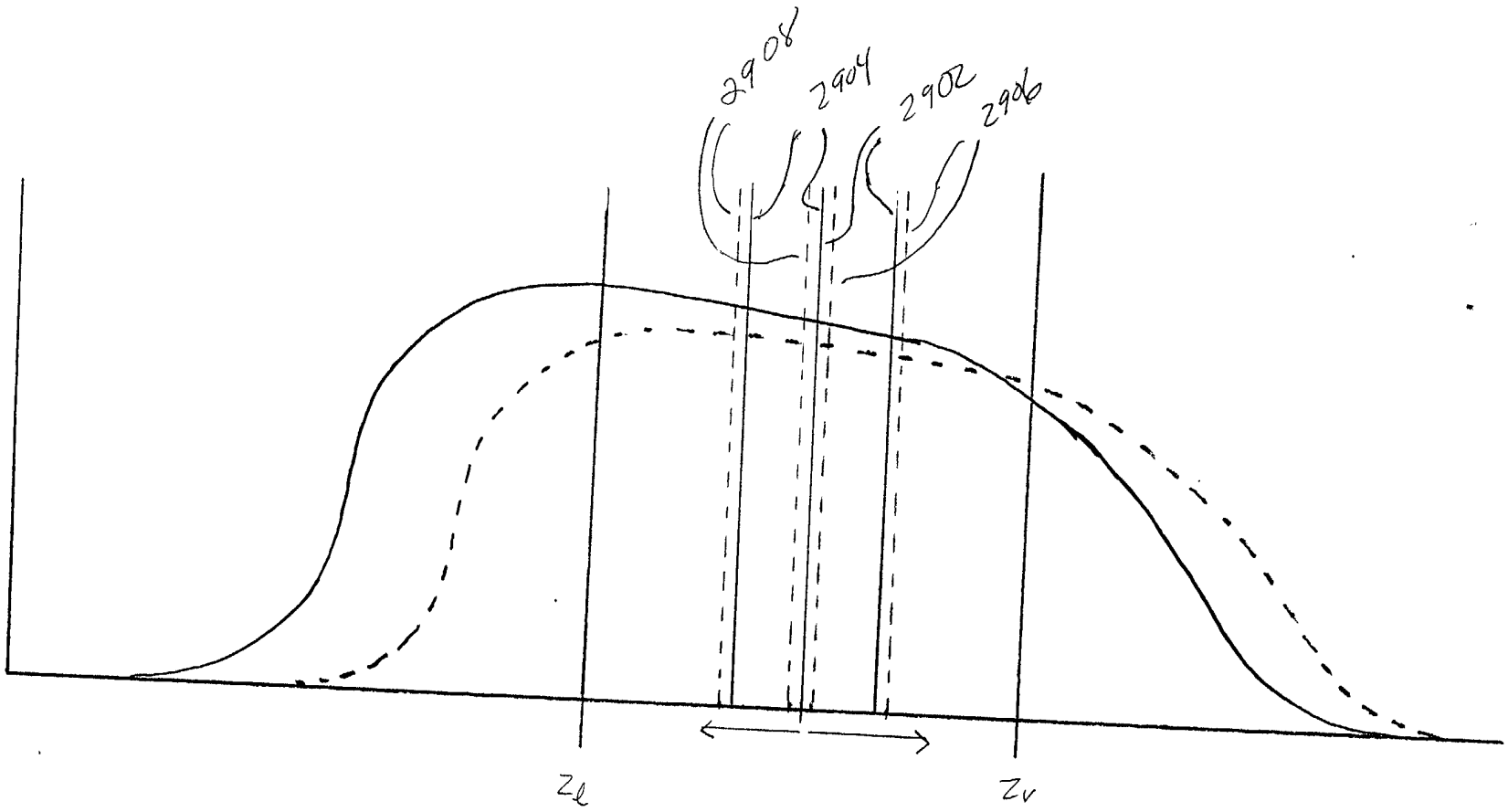


Figure 29

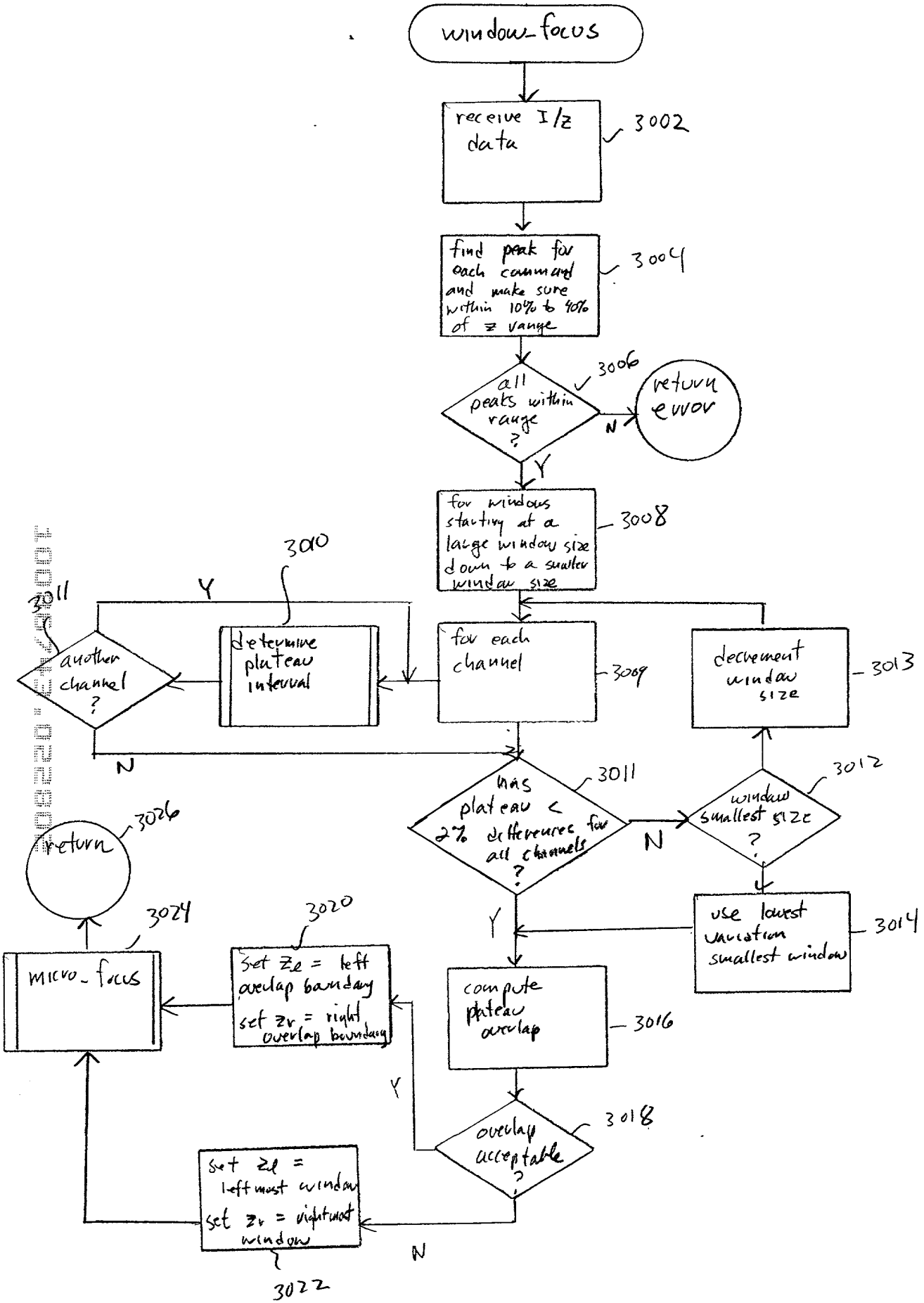

window_focus
receive I/z data
3002
find peak for each command and make sure within 10% to 90% of z range
3004
all peaks within range ?
3006
N
return error
Y
for windows starting at a large window size down to a smaller window size
3008
3010
Y
another channel ?
3011
determine plateau interval
for each channel
3009
decrement window size
3013
N
has plateau < 2% differences for all channels ?
3011
N
window smallest size ?
3012
return
3026
Y
use lowest variation smallest window
3014
micro_focus
3024
set zl = left overlap boundary
set zr = right overlap boundary
3020
compute plateau overlap
3016
Y
overlap acceptable ?
3018
set zl = leftmost window
set zr = rightmost window
3022
N

Figure 30

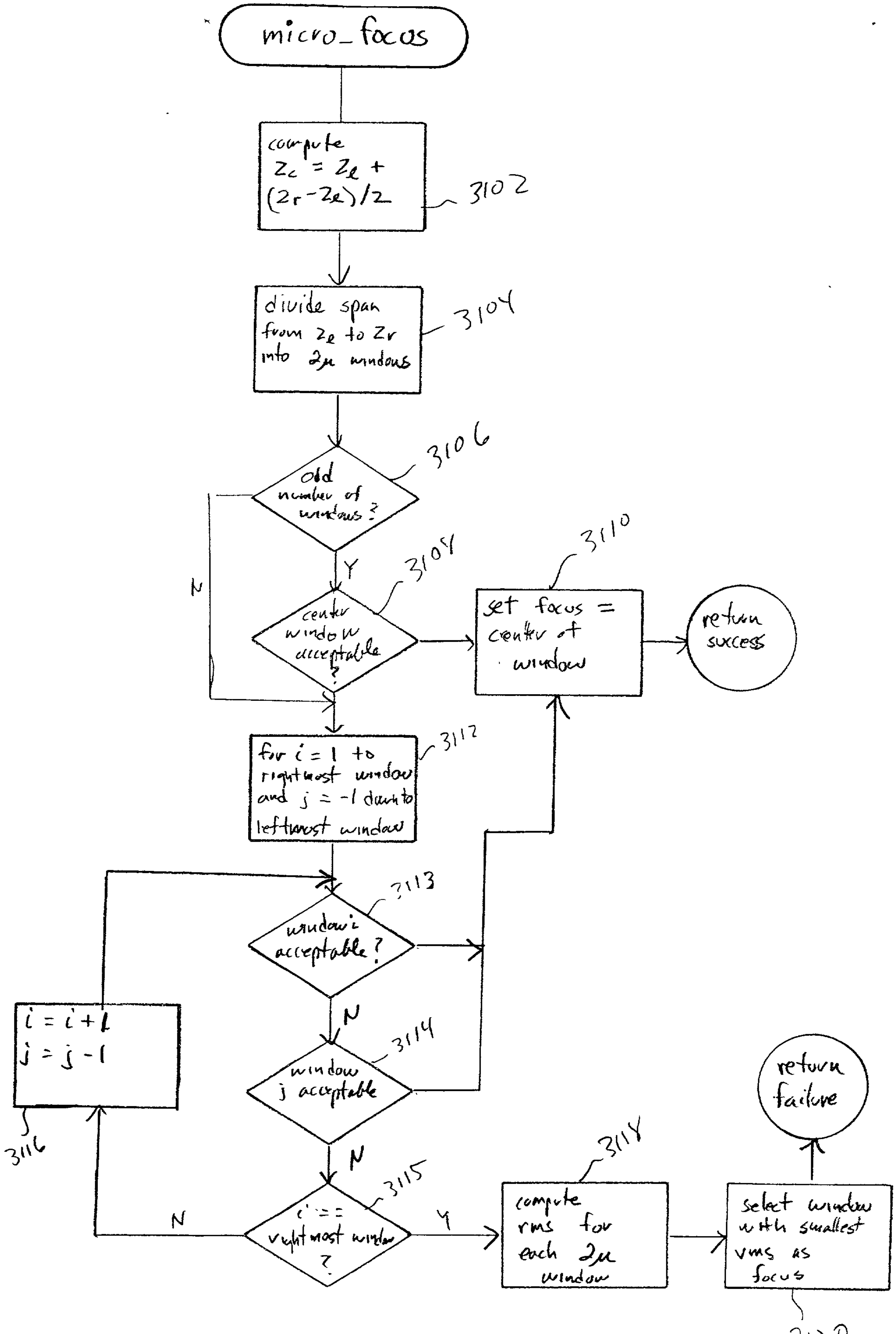


Figure 31